HABITAT OBSERVATIONS OF *ARIOLIMAX COLUMBIANUS* GOULD

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Evidence is presented here which indicates that the California native slug, *Ariolimax columbianus* Gould, tends to have a possible homing instinct. Data indicate, too, that a possible temporary commensalism exists during extended dry periods between the sow bug, *Porcellio scaber* Latreille and this slug. Observations were carried out behind the Mills College Campus, Oakland, California.

One specimen of *Ariolimax columbianus* Gould was found in fallen humus of *Salix* in the bottom of a dry stream bed, which was shaded throughout the day by overhanging willows. The slug had excavated a concave depression approximately one by four inches in the loose soil washed into the stream bed from the banks; the concavity was lined on the bottom by secreted mucous. Slime tracks to and from the collecting spot indicated a probable homing instinct. Fecal masses in all stages of dessication from fresh to dry were observed in the same area. Both fecal masses and dried slime tracks were detected on a semi-prostrate willow up to a height of three feet above the ground, giving evidence of arboreal tendencies.

A second *Ariolimax columbianus* Gould was collected from the base of a four to five foot, decomposed granite and stream deposited bank. No trees overhung the stream, but dead grass hung down approximately a foot over the bank. The mollusk had dug a concavity in the soil about two by six inches; the concavity possessed a roof composed of two decomposed granite rocks. Fecal masses in all stages of drying within the concavity and dried slime tracks around the burrow were observed. In the surrounding area fecal masses and slime tracks in various degrees of dryness were noted extending as far as fifteen feet from the retreat. This evidence and the fact that no other slugs were found in this vicinity supports evidence that this individual exhibited a homing instinct. This slug species apparently makes extensive foraging trips.

In the two slug concavities recorded, the sow bug, *Porcellio scaber* Latreille, was abundant crawling beneath the slugs, while in the surrounding areas they were rare. It is quite possible that such an association enhances the survival rate of sow bug populations throughout the dry season typical of this region of California. If the above animal association is further confirmed it is probably one of temporary commensalism.

It is suggested that the California slug collectors make use of the two types of "signs," fecal masses and slime tracks, in locating these animals. During a dry spell if these "signs" but no slugs are observed, a return to the same region during a rain will generally bring success in collecting. Slug "signs" have often been observed in Redwood Canyon behind Mills College, California, during dry periods. By marking the areas and returning to them during rainy periods many collections have been made.

In lower Redwood Canyon "signs" of *Ariolimax columbianus* Gould have often been observed on exposed roots of the live oak, *Quercus agrifolia* Née and *Sequoia sempervirens* Endl. "Signs" have been observed beneath wild blackberry bushes and on oak leaves on the alluvial land at the canyon's mouth. During the rainy season the slug has been seen in abundance crawling on oak leaf humus (*Q. agrifolia* Née) in east Oakland, California.

FRANK COLLINS BAKER

(December 14, 1867 to May 7, 1942)

Frank Collins Baker, President of the American Malacological Union, died on May 7, 1942, after failure to recover from a major surgical operation. Ever since 1894 he had been recognized as a leading figure in the study of Mollusca in the Middle West. In addition, he has been a very active worker in the fields of paleontology, ecology, archeology and museum administration.

Born on December 14, 1867, of pioneer colonial stock, he recalled shells among his earliest memories in the home of a seafaring grandfather. Through most of his life, shells and the animals which produced them continued to command his in-